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of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be permitted to the same standards as the original installations. However, all new installations or major replacements shall meet the applicable requirements in this subpart for new installations.

(2) The details of the systems shall be in general agreement with §§193.15-5 through 193.15-40 insofar as is reasonable and practicable, with the exception of §193.15-5(d) (1), (2), and (4), covering machinery spaces, etc., which systems may be installed in accordance with paragraphs (a) (3) through (6) of this section.

(3) In boilerrooms, the bilges shall be protected by a system discharging principally below the floorplates. Perforated pipe may be used in lieu of discharge nozzles for such systems. The number of pounds of carbon dioxide shall be equal to the gross volume of the boilerroom taken to the top of the boilers divided by 36. In the event of an elevated boilerroom which drains to the machinery space, the system shall be installed in the engineroom bilge and the gross volume shall be taken to the flat on which the boilers are installed.

(4) In machinery spaces where main propulsion internal combustion machinery is installed, the number of pounds of carbon dioxide required shall be equal to the gross volume of the space taken to the under side of the deck forming the hatch opening divided by 22.

(5) In miscellaneous spaces other than cargo or main machinery spaces the number of pounds of carbon dioxide required shall be equal to the gross volume of the space divided by 22.

(6) Branch lines to the various spaces other than cargo and similar spaces shall be as noted in Table 193.15-90(a)(6). This table is based on cylinders having discharge outlets and siphon tubes of $\frac{3}{8}$ -inch diameter.

TABLE 193.15-90(a)(6)

Number of cylinders		Nominal pipe size, inches
Over	Not over	
.....	2	$\frac{1}{2}$ —standard.

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TABLE 193.15-90(a)(6)—Continued

Number of cylinders		Nominal pipe size, inches
Over	Not over	
2	4	$\frac{3}{4}$ —standard.
4	6	1—extra heavy.
6	12	$1\frac{1}{4}$ —extra heavy.
12	16	$1\frac{1}{2}$ —extra heavy.
16	27	2—extra heavy.
27	39	$2\frac{1}{2}$ —extra heavy.
39	60	3—extra heavy.
60	80	$3\frac{1}{2}$ —extra heavy.
80	104	4—extra heavy.
104	165	5—extra heavy.

Subpart 193.30—Automatic Sprinkler Systems

§ 193.30-1 Application.

Automatic sprinkling systems shall comply with NFPA 13-1996.

[CGD 95-028, 62 FR 51220, Sept. 30, 1997]

Subpart 193.50—Hand Portable Fire Extinguishers and Semiportable Fire Extinguishing Systems, Arrangements and Details

§ 193.50-1 Application.

(a) The provisions of this subpart, with the exception of §193.50-90, shall apply to all vessels, including non-self-propelled vessels of less than 300 gross tons, contracted for on or after March 1, 1968.

(b) All vessels other than unmanned barges contracted for prior to March 1, 1968, shall meet the requirements of §193.50-90.

(c) All unmanned barges are exempted from the requirements in this subpart. However, if such barges carry on board hand portable fire extinguishers and semiportable fire extinguishing systems, then such equipment shall be in accordance with this subpart for manned barges.

§ 193.50-5 Classification.

(a) Hand portable fire extinguishers and semiportable fire extinguishing systems shall be classified by a combination letter and number symbol. The letter indicating the type of fire which the unit could be expected to extinguish and the number indicating the relative size of the unit.

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(b) The types of fire will be designated as follows:

(1) "A" for fires in ordinary combustible materials where the quenching and cooling effects of quantities of water, or solutions containing large percentages of water, are of first importance.

(2) "B" for fires in flammable liquids, greases, etc., where a blanketing effect is essential.

(3) "C" for fires in electrical equipment where the use of nonconducting extinguishing agent is of first importance.

(c) The number designations for size will start with "I" for the smallest to "V" for the largest. Sizes I and II are considered hand portable fire extinguishers and sizes III, IV, and V are considered semiportable fire extinguishing systems which shall be fitted with suitable hose and nozzle or other practicable means so that all portions of the space concerned may be covered. Examples of size graduations for some of the typical hand portable and semiportable fire extinguishing systems are set forth in Table 193.50-5(c).

TABLE 193.50-5(c)

Classification		Soda-acid and water, gals.	Foam, gals.	Carbon dioxide, lbs.	Dry chemical, lbs.
Type	Size				
A	II	2½	2½	.....	.....
B	I .....	.....	1¼	4	2
B	II .....	.....	2½	15	10
B	III .....	.....	12	35	20
B	IV .....	.....	20	50	30
B	V .....	.....	40	100	50
C	I .....	.....	.....	4	2
C	II .....	.....	.....	15	10

(d) All hand portable fire extinguishers and semiportable fire extinguishing systems shall have permanently attached thereto a metallic nameplate giving the name of the item, the rated capacity in gallons, quarts, or pounds, the name and address of the person or firm for whom approved, and the identifying mark of the actual manufacturer.

(e) Vaporizing liquid type fire extinguishers containing carbon tetrachloride or chlorobromomethane or other toxic vaporizing liquids shall not be permitted.

§ 193.50-10 Location.

(a) Approved hand portable fire extinguishers and semiportable fire extinguishing systems shall be installed in accordance with Table 193.50-10(a). The location of the equipment shall be to the satisfaction of the Officer in Charge, Marine Inspection. Nothing in this paragraph shall be construed as limiting the Officer in Charge, Marine Inspection, from requiring such additional equipment as he deems necessary for the proper protection of the vessel.

(b) Semiportable fire extinguishing systems shall be located in the open so as to be readily seen.

(c) If hand portable fire extinguishers are not located in the open or behind glass so that they may be readily seen, they may be placed in enclosures together with the firehose, provided such enclosures are marked as required by § 196.37-15 of this subchapter.

TABLE 193.50-10(a)—HAND PORTABLE FIRE EXTINGUISHER AND SEMI-PORTABLE FIRE EXTINGUISHING SYSTEMS

Space	Classification (see § 193.50-5)	Quantity and location
<i>Safety Areas¹</i>		
Wheelhouse or fire control room .....	.....	None required.
Stairway and elevator enclosures .....	.....	Do.
Communicating corridors	A-II	1 in each main corridor not more than 150 feet apart. (May be located in stairways.)
Lifeboat embarkation and lowering stations .....	.....	None required.
Radio room	C-I ²	2 in vicinity of exit. ²
<i>Accommodations¹</i>		
Staterooms, toilet spaces, public spaces, offices, lockers, isolated storerooms, and pantries open decks, etc.	.....	None required.